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Regional Sediment Management - Applications of the “Watershed Approach”



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In This Session:

- **“Watershed Approach” & RSM as an example of it**
- **RSM Applications and Experiences**
 - Mobile, Los Angeles, Philadelphia, Jacksonville Districts

Increasing Stakeholder Demands for:

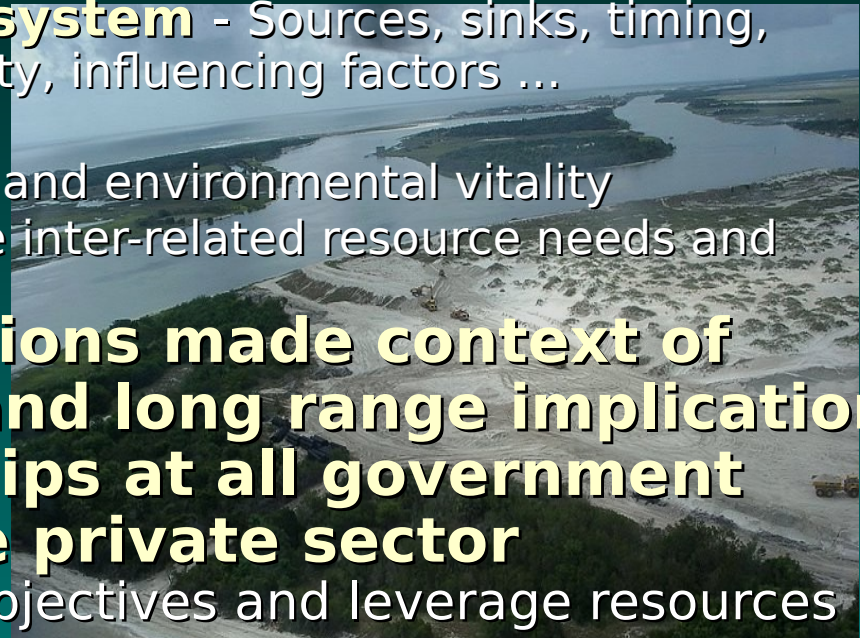
- **Integrated problem solving**
- **Emphasis on “system approaches”**
 - ecosystem - watershed - regional sediment systems
 - Interrelating components & processes of:
 - **Natural systems** (e.g. hydrologic, sediment, ecological)
 - **Institutional systems:** Agencies & levels of government, public, private
 - Including cross functional areas in Corps: new projects, water control management, O&M, Natural Resources Mgt, Regulatory,...
 - More cost effective solutions by working across business lines
- **Consideration of Sustainability**
 - Longer term consequences of decisions & actions
 - Weighing economic, environmental, social – benefits & costs in alternatives
 - Alternative trade-off considerations

CW Strategic Plan & Budget Testimony Endorse “Watershed Approach”

- **Applying system perspective**
 - that integrates problem solving for interrelated water resource issues, and pursuing collaborative approaches to implementing solutions.
- **Broader spatial/geographic considerations in understanding issues and developing solutions**
- **Balancing multiple demands and objectives**
- **Collaboration among projects, programs, agencies, and stakeholders approach**
- *RSM identified as a watershed approach application example*

RSM Approach

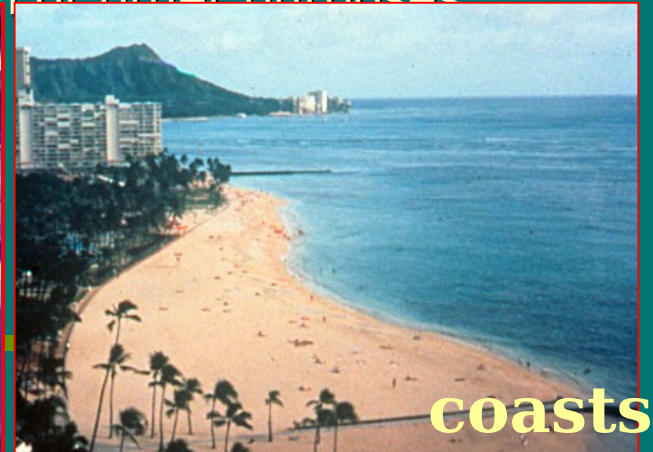
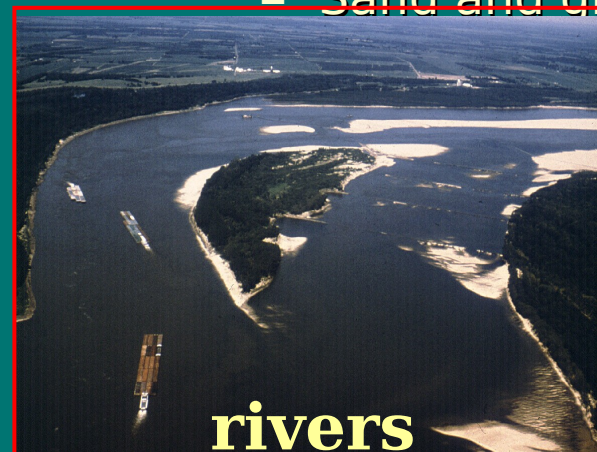
- **Integrates management of projects & activities involving sand & other sediments within the context of coastal, river & estuarine systems**
 - To achieve balanced and sustainable solutions to sediment related needs and opportunities
- **Recognizes**
 - **Regional sediment system** - Sources, sinks, timing, direction, quantity, quality, influencing factors ...
 - **Sand as a Resource**
 - Integral to economic and environmental vitality
 - Consider the multiple inter-related resource needs and opportunities
- **Local project decisions made context of sediment system and long range implications**
- **Involves partnerships at all government levels and with the private sector**
 - to leverage balance objectives and leverage resources



Sediment Management Activities

- Actions that affect the *transport, erosion, removal, and deposition* of sediment in a region. e.g.

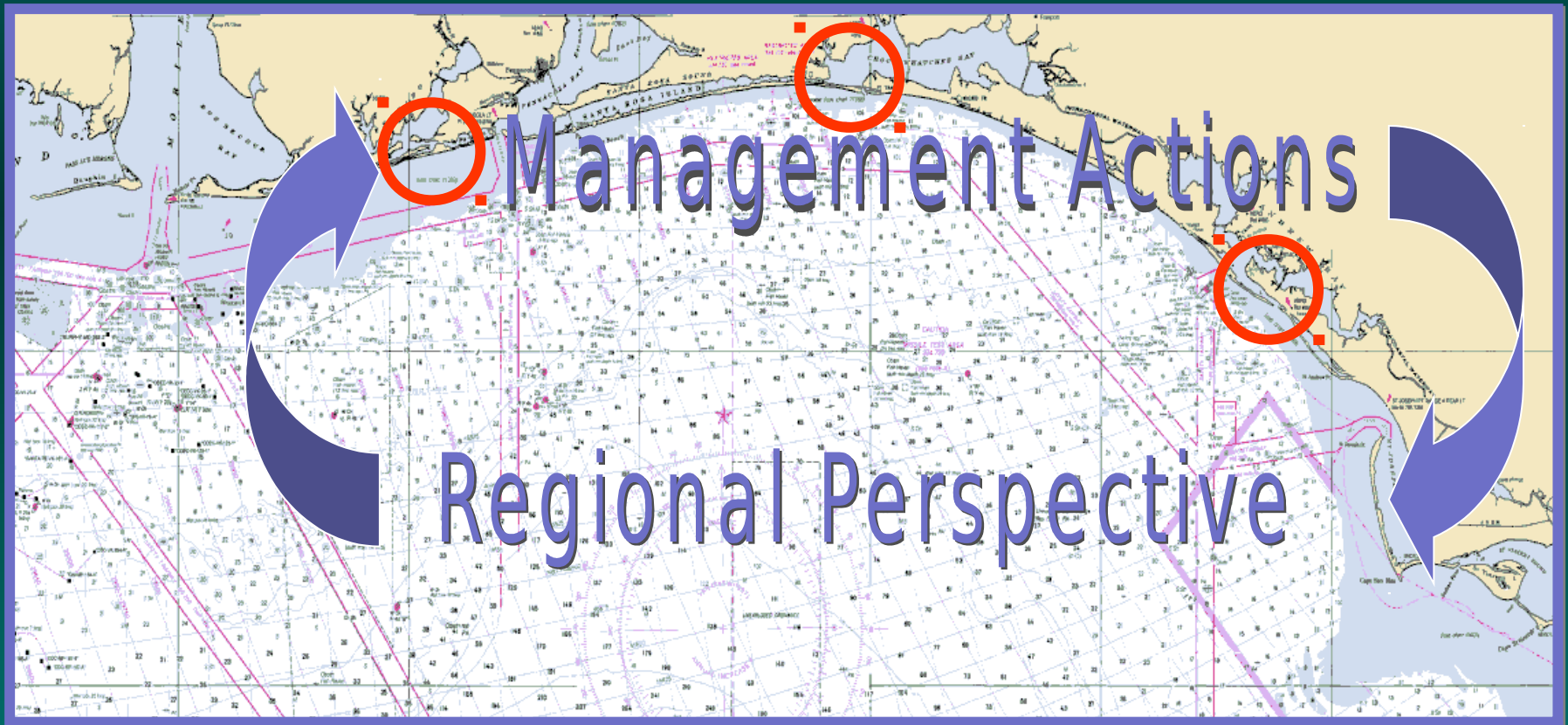
- Dredging and placement
- Building structures that divert or trap sediment
- Erosion protection structures or methods for riverbanks, shorelines, sea beds, and channel bottoms
- Habitat stabilization and restoration
- Sand and gravel mining for construction or other purposes



Interconnectedness of System Components

- **Physical Systems**
- **Ecological Systems**
- **Governmental/Institutional Systems**
 - national, state local - different roles, address different public needs, and have different perspectives
- **Interest Sectors and Related Objectives**
 - e.g. at coast: recreation, tourism, infrastructure, fisheries, oil and gas development, marine mammal protection, port development, ...
- Local actions in System or Regional Context

Regional Sediment Management



What is the “Region”?

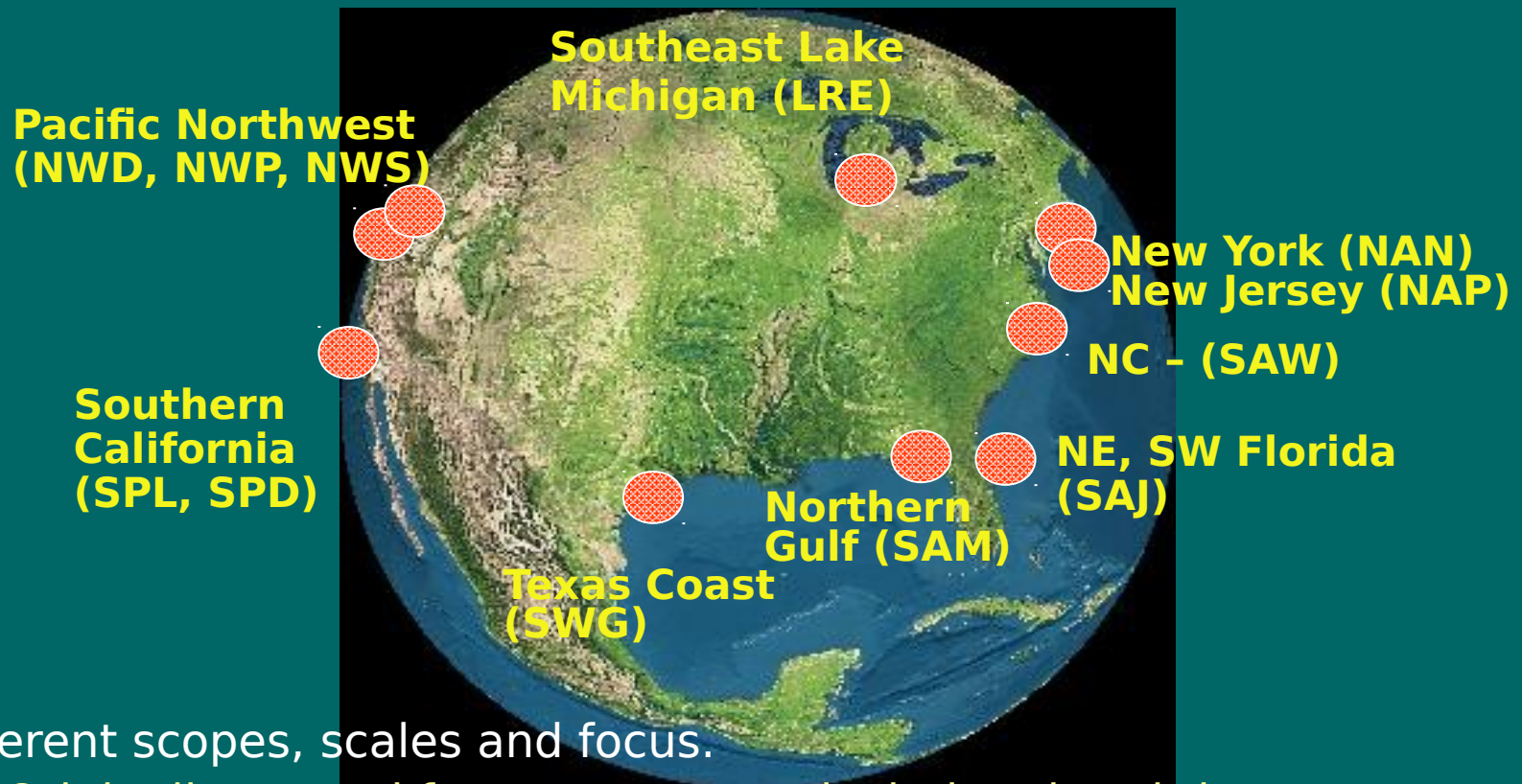
- ***First* defined in terms of the sediment regime**
 - Encompassed by the sediment cell or system
 - Includes the sediment sources, sinks and influencing features
- **Consider the area over which management actions will have impact**
 - Within the time frame of interest
 - With regard to plan objectives or management issues
- **Then, overlay geopolitical, regulatory and management jurisdictions.**

“Sediment-shed”



RSM Demonstration Projects

To examine, apply and evaluate RSM opportunities, practices, tools, benefits and impediments



- Different scopes, scales and focus.
 - Originally coastal focus, now some include related river systems
- Components in each: Technical, Programmatic/Procedural, Institutional

Next: RSM Experiences

- **Vern Gwin – Mobile District** - RSM PDT - adoption of the RSM approach
- **Susie Ming, Los Angeles District** - a) Analysis of dredged material placement alternatives, linking navigation channel maintenance w/placement of material on alternative beaches; and b) Coastal Sediment Management Workgroup – Corps- CA Resource Agencies partnership
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- **Monica Chasten, Philadelphia District** – 1) RSM implementation in NAP – incl. Ocean City and Cape May City/Meadow/Point/RSM demo projects; and, 2) the Alternative Long Term Nourishment Study
- **Dan Abecassis, Jacksonville District** - Section 22 in identifying and evaluating RSM needs and opportunities; perspective on RSM as an application of the watershed approach